Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method of forming a film having a dielectric constant of 2.55 or less on a substrate, said method comprising:

(a) positioning the substrate on a ~~non-biased~~ D.C. grounded support in a chamber;

(b) supplying to the chamber in gaseous or vapour form a silicon-containing organic compound and an oxidizing agent in the presence of a plasma to deposit a film on the substrate positioned on the ~~non-biased~~ grounded support, wherein the plasma is supplied from an RF power source connected to an electrode opposing the grounded support; and

(c) setting the film such that carbon-containing groups and Si-H bonds are contained therein and the film has a dielectric constant of 2.55 or less, wherein the oxidising agent is oxygen.

2. (cancelled).

3. (previously presented): A method according to claim 1, wherein the silicon-containing organic compound is an alkylsilane.

4. (previously presented): A method according to claim 1, wherein the silicon containing organic compound is a tetraalkylsilane.

5. (cancelled).

6. (previously presented): A method according to claim 1, wherein the silicon-containing organic compound is a methylsilane.

7. (original): A method according to claim 3, wherein the silicon-containing organic compound is cyclohexyldimethoxymethylsilane.

8. (currently amended): A method according to claim 1, wherein the grounded supported is at a low temperature during deposition of the film ~~is deposited on a substrate positioned on a low temperature support~~.

9. (currently amended): A method according to claim 1 [[6]], wherein the grounded support is at a temperature between about 0°C to about 60°C during deposition of the film.

10. (currently amended): A method according to claim 6 wherein the grounded support is at about 30°C during deposition of the film.

11 – 12. (cancelled)

13. (currently amended): A method of forming a film having a dielectric constant of 2.55 or less on a substrate, said method comprising:

(a) positioning the substrate on a ~~non-biased~~ D.C. grounded support in a chamber;

(b) supplying to the chamber in gaseous or vapour form tetramethylsilane and oxygen in the presence of a plasma to deposit a film on the substrate positioned on the ~~non-biased~~ grounded support in the chamber, wherein the plasma is supplied from an RF power source connected to an electrode opposing the grounded support; and

(c) setting the film such that carbon-containing groups and Si-H bonds are contained therein and the film has a dielectric constant of 2.55 or less.

14 – 15. (cancelled)

16. (previously presented): A method as claims in claim 13 wherein the film is set by exposing it to an H_2 containing plasma without any prior annealing or heating step.

17. (original): A method as claimed in claim 16 wherein the H_2 containing plasma is substantially only a H_2 plasma.

18. (previously presented): A method as claimed in claim 16 wherein the H_2 containing plasma treatment last for between 30 seconds and 30 minutes.

19. (previously presented): A method as claimed in claim 16 wherein the H_2 containing plasma treatment lasts from 1 to 10 minutes.

20. (previously presented): A method as claimed in claim 16 wherein the H_2 containing plasma treatment step lasts no more than 5 minutes.

21. (previously presented): A method as claimed in claim 16 wherein the H_2 containing plasma treatment step lasts no more than 10 minutes.

22. (original) A method as claimed in claim 16 where the hydrogen containing plasma is applied simultaneously with heating.

23. (original) A method as claimed in claim 22 where the substrate is heated to approximately 400°C.

24. (cancelled).

25. (original): A method as claimed in claim 1 where the setting of the film substantially removes water and/or OH peaks from the FTIR spectra of the as deposited film.

26 – 29. (cancelled)

30. (previously presented): A method as claimed in claim 1, wherein said setting includes annealing the film to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

31. (previously presented): A method as claimed in claim 1, wherein said setting includes subjecting the film to a hydrogen-containing plasma to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

32. (previously presented): A method as claimed in claim 13, wherein said setting includes annealing the film to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

33. (previously presented): A method as claimed in claim 13, wherein said setting includes subjecting the film to a hydrogen-containing plasma to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

34. (previously presented): A method as claimed in claim 26, wherein said setting includes annealing the film to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

35. (previously presented): A method as claimed in claim 26, wherein said setting includes subjecting the film to a hydrogen-containing plasma to remove at least one of H_2O and OH from the film with the carbon-containing groups remaining therein.

36 – 37. (cancelled)

38. (previously presented): A method according to claim 1, further comprising depositing a resist on the set film and subsequently stripping the resist using oxygen.

39. (previously presented): A method according to claim 38, wherein the film is substantially unaffected by the oxygen used in stripping the resist.

40. (previously presented): A method according to claim 13, further comprising depositing a resist on the set film and subsequently stripping the resist using oxygen.

41. (previously presented): A method according to claim 40, wherein the film is substantially unaffected by the oxygen used in stripping the resist.

42 – 43. (cancelled)